ABSTRACT OF THE DISCLOSURE

A semiconductor device includes a semiconductor substrate, an insulating layer disposed on the semiconductor substrate, an SOI film disposed on the insulating layer, a gate insulator disposed on the SOI film, and a gate electrode disposed on the gate insulator. A source, a drain, and a channel are formed in the SOI film so that the gate insulator is located at least between the channel and the gate electrode, thereby forming a MOSFET including the source, the drain, the channel, the gate electrode, and the gate insulator. The gate electrode is made of P-type polysilicon doped with P-type impurities such as boron. Further, the channel is doped with N-type impurities such as arsenic or phosphorus.